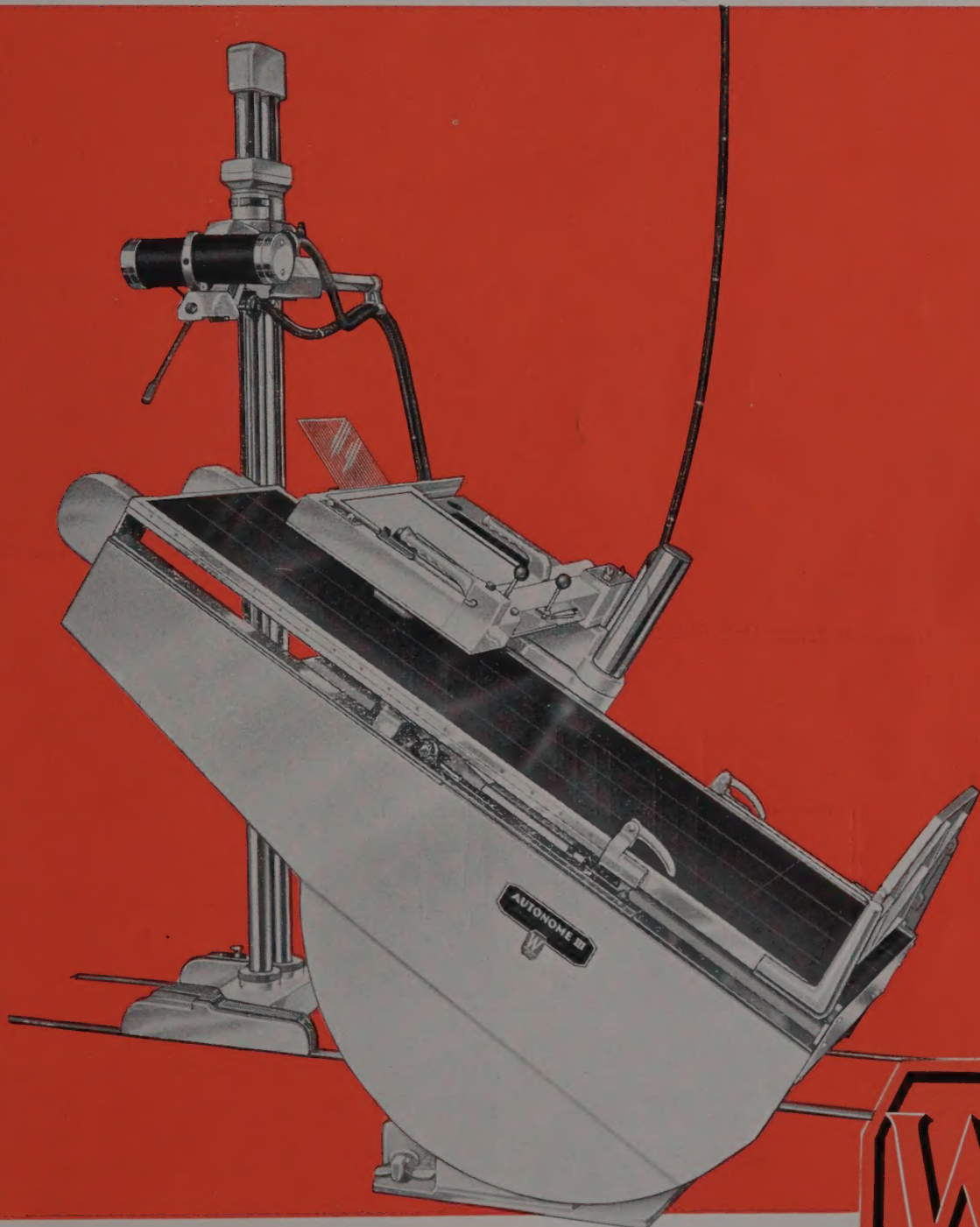


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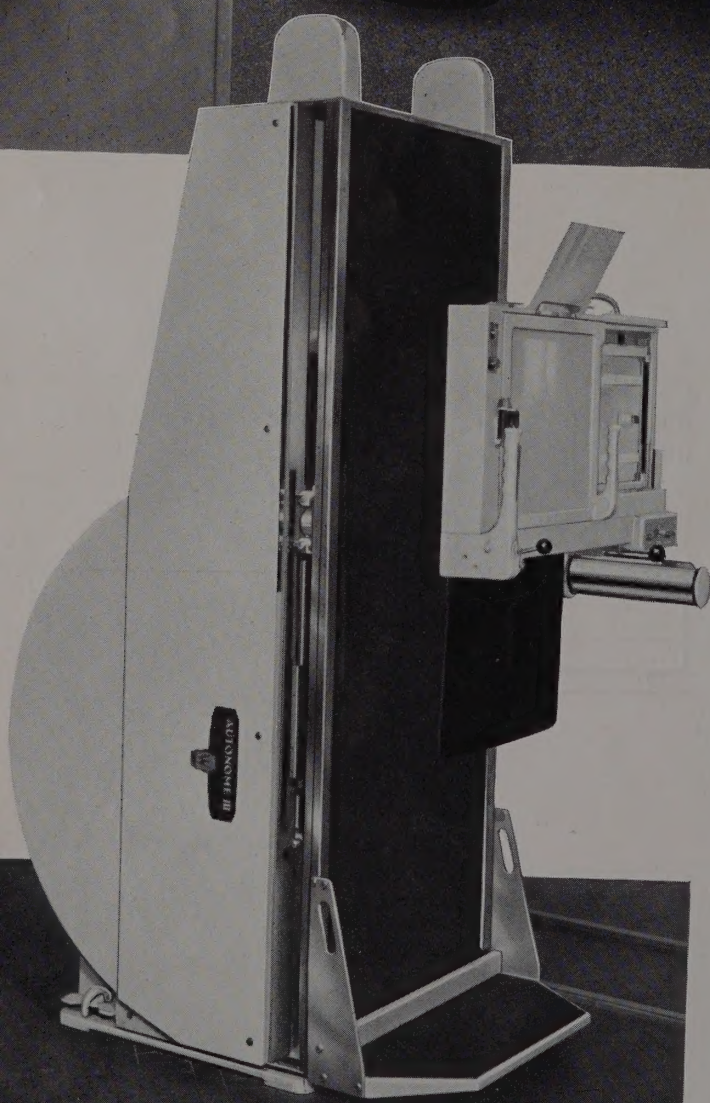
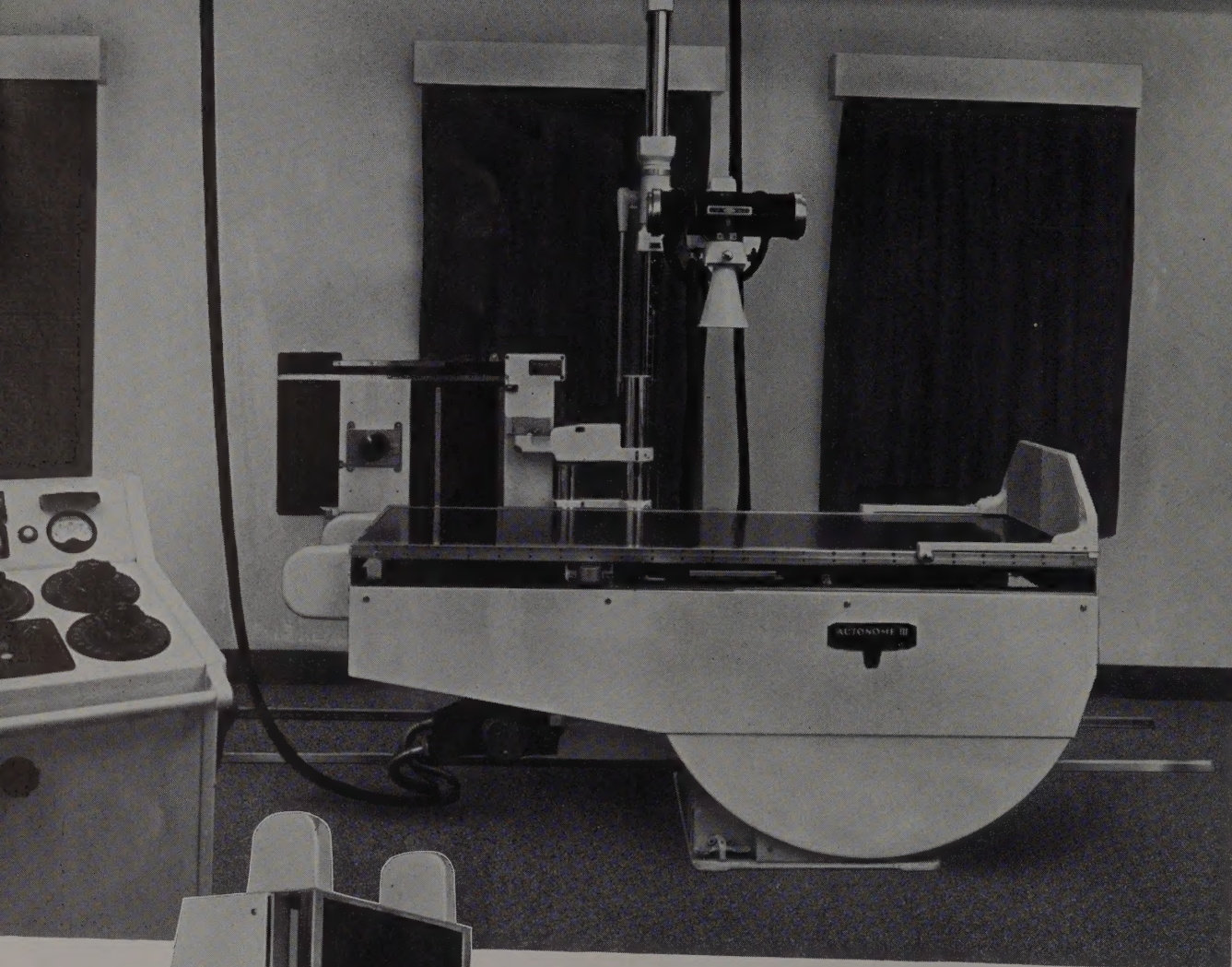
AUTONOME III (Series 4)

MOTOR-DRIVEN DIAGNOSTIC TABLE



WATSON & SONS (ELECTRO-MEDICAL) LTD





The above illustration shows an X-ray room—typical of many throughout the world—in which radiography of the highest standard is carried out. The two Machlett Dynamax X-ray tubes are energized by a Watson Roentgen IV generator.

At the left the Autonomie III is shown in the vertical position. The diaphragm controls, screening, exposure and magnetic brake release buttons are convenient to the left hand.

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AUTONOME III

Series 4

Motor-Driven Diagnostic table

FEW X-ray tables have enjoyed such widespread success as the Autonomie III. Although in production for several years, it has been kept up-to-date by the incorporation of improvements suggested by experience, and the present series thus combines the advantages of a well-proven basic design with the most modern features. The table is particularly to be recommended for use where there is a preponderance of gastrointestinal and oesophageal work, but it is equally convenient for chest and general radiography.

Two models of the Autonomie III are available, for use with one or two shockproof tubes respectively, the latter having the undertable tube permanently mounted on the screening carriage. Rotating anode tubes (including high voltage types) may be used both undertable and overtable if required.

The following specification applies to both types except where stated otherwise.

THE TABLE BODY

The supporting pedestals and all driving mechanism are concealed behind side panels which are flush with the upper edge. It is thus possible for the operator to stand close to the table top throughout its length (space being allowed near the floor for the toes).

A conveniently situated pedal actuates the motor-drive mechanism. Depression of one side of the pedal causes the table to tilt from vertical to ten degrees below the horizontal, and the other in the reverse direction. Movement is automatically arrested at the vertical, horizontal, and adverse tilt positions. The horizontal limiting switch can however, be isolated if it is desired to move directly through the horizontal from the vertical or adverse tilt positions.

The time taken to tilt from the vertical to the horizontal position is only 30 seconds, the movement being smooth and practically silent. A magnetic brake arrests the table top at any position and without jarring when coming to rest. Limit switches preclude the possibility of over-running, and other safety devices are incorporated to prevent accidental damage to the tubes or table mechanism.

THE POTTER-BUCKY DIAPHRAGM

A fine line grid (75 lines per inch) and electrically actuated mechanism for exposures down to less than $1/20$ th second are features of the Watson continuous motion Potter-Bucky diaphragm.

A special grid for high voltage radiography which can be interchanged with the standard grid is available as an extra if required.

The cassette tray embodies self-centring clamps for cassettes up to 14×17 in. (30×40 cm.) with either the long or short axis parallel to the long axis of the table.

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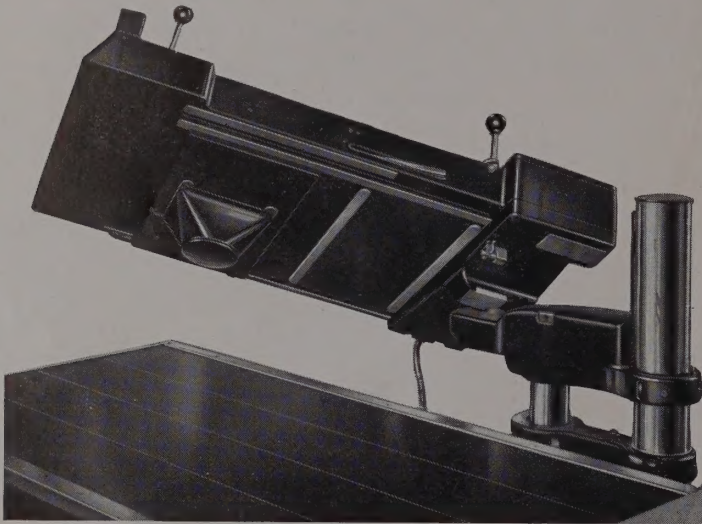


The table in the adverse tilt position showing use of shoulder rest.

WATSON AUTONOME III

Robust twin-column tube-stand is mounted on a double floor rail. There is complete absence of vibration when a rotating anode tube is operated.

Manipulating handle and brake for vertical travel of tube-carriage. It is accessible from either side of the table.

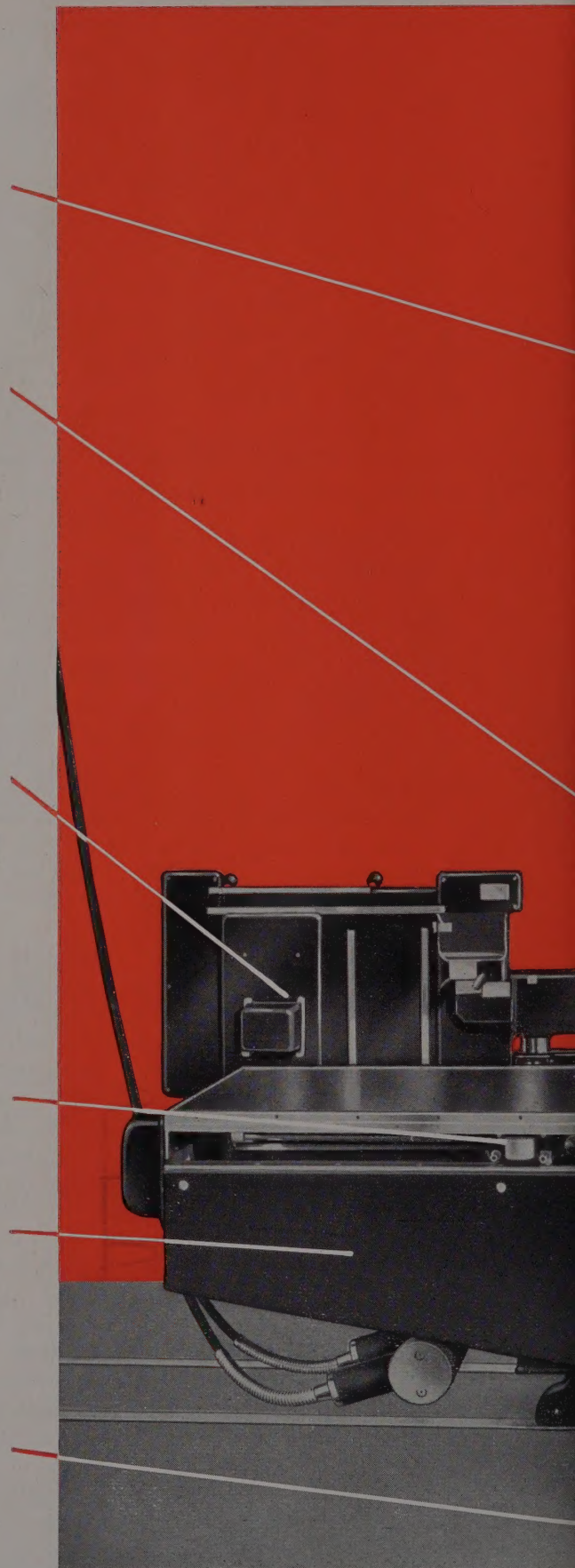


In the above illustration the fluorescent screen assembly is shown hinged on its "Unipivot" mounting half way between the normal position and the "parked" position as in the larger illustration.

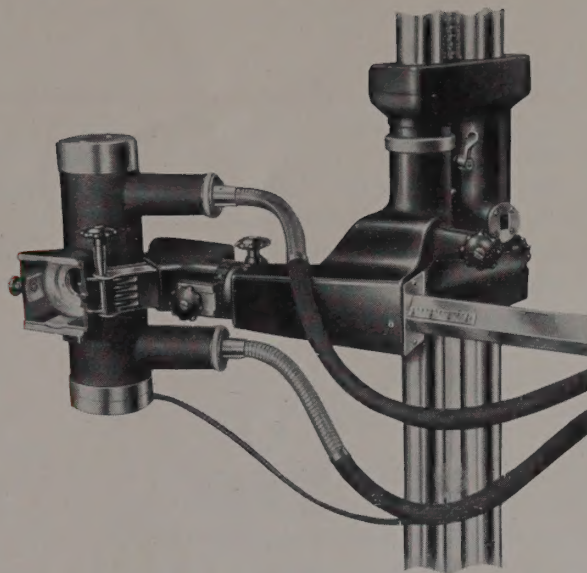
Lock for lateral movement of screen assembly.

Note flush sides affording a high degree of X-ray protection. Detachable lead-rubber aprons are also supplied.

Pedal controlling tilt; movement from 10 degrees adverse to vertical is smooth and quiet. Safety switches preclude risk of damage to under-table tube.



NOTE: Although the illustrations on these pages show the Autonomie III table finished in black, the standard finish is now WHITE.



A valuable feature of the tube-clamp is that the tube can be rotated on its long or short axis about the centre of the tube focus. For radiography across the table or over a stretcher, the tube carriage and cross-arm can be rotated round the vertical column.

Adjustable tube diaphragm and hinged telescopic centre finder (optional).

Table top is entirely free from projections. It has a low X-ray absorption value yet is strong and easily kept clean.

Side members support foot-rest, shoulder-rest immobiliser and hand-grips. (Not illustrated.)

Reciprocating Potter-Bucky diaphragm moves in synchronism with fluorescent screen unit and cannot obstruct X-ray beam when undertable tube is in use.

Scales on side assist overtable radiography of regions positioned by screening.

Floor track for tube-stand is flat and thus causes the minimum of obstruction.



Continued from page 3.

One of the most valuable features of the "Autonome III" is a system which always ensures that the Potter-Bucky diaphragm is free of the path of radiation when the fluorescent screen is in use with the undertable tube. This result has been brought about by arranging for the diaphragm and the fluorescent screen carriages to move in synchronism, the same counterweighting system being used for both.

The Potter-Bucky Diaphragm may be coupled to move in unison with the tube stand, or when overtable radiography follows fluoroscopy, the Bucky can be centred rapidly in the position formerly occupied by the centre of the fluorescent screen (by reference to a scale). It is thus quite easy to centre a cassette accurately over a small area previously located visually.

THE TUBE STAND

The twin column tube stand is very robust and capable of supporting a rotating anode tube without vibration. The floor rails for the tube stand have a thickness of only about $\frac{3}{4}$ in. (18 mm.) and therefore causes very little obstruction. The range of movement is shown in the drawing on page 7.

All movements of the tube stand are on ball-bearing rollers, and bold scales are provided. The shockproof cables from the X-ray tubes are clamped in a swivelling member at the end of the tube cross-arm, and are thus always free of the supporting columns.

The tube-clamp makes it possible to rotate the tube about its long or short axis, rotation being about the centre of the tube focus. Angulating scales define the deviation from the vertical in both planes.

"UNIPIVOT" SCREEN MOUNTING AND MAGNETIC BRAKES

The fluorescent screen has a wide range of travel (see page 7) including a table-to-screen distance adequate for the complete rotation of the patient during examination. Improved counterweighting and electro-magnetic brakes combine to render the movement of the fluorescent screen extremely light.

When not required for use, the complete screen carriage can be pivoted down to the offside of the table in a single movement by means of the "Unipivot" mounting, leaving the table top clear.

MOVING GRID AND CASSETTE HOLDER.

An exposure - controlled continuous motion "Lucidex" 9:1 ratio grid size 14×17 in. is provided for radiography and fluoroscopy. It is retractable from the field by a single movement.

The cassette holder behind the fluorescent screen, will accommodate cassettes size 12×15 in. A description of the serial cassette changer is given below.

In the case of the single tube model table, the tube can be coupled to move in synchronism with

Continued on page 8.

THE SERIAL CHANGER

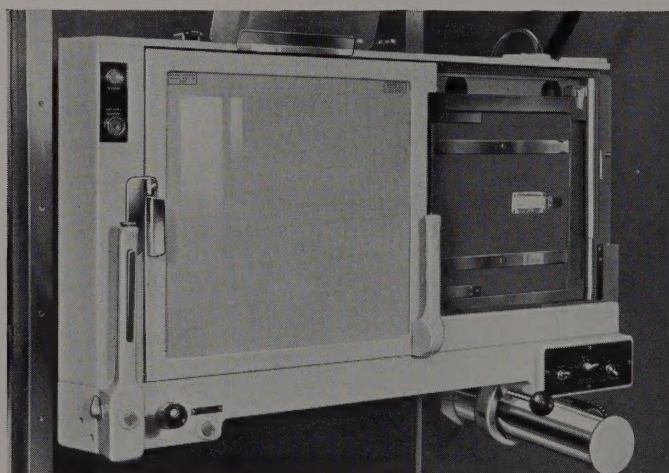
This is built into the screen assembly and permits the following exposure combinations to be made with standard cassettes.

Cassette Size	Four radiographs	Two radiographs	One radiograph
8×10 in.	4×5 in.	4×10 in.	8×10 in.
10×12 in.	—	5×12 in.	10×12 in.
18×24 cm.	9×12 cm.	9×24 cm.	18×24 cm.
24×30 cm.	—	12×30 cm.	24×30 cm.

Cassettes size 12×15 in. can also be placed behind the fluorescent screen. A detachable ledge is supplied for larger cassettes up to size 14×17 in.

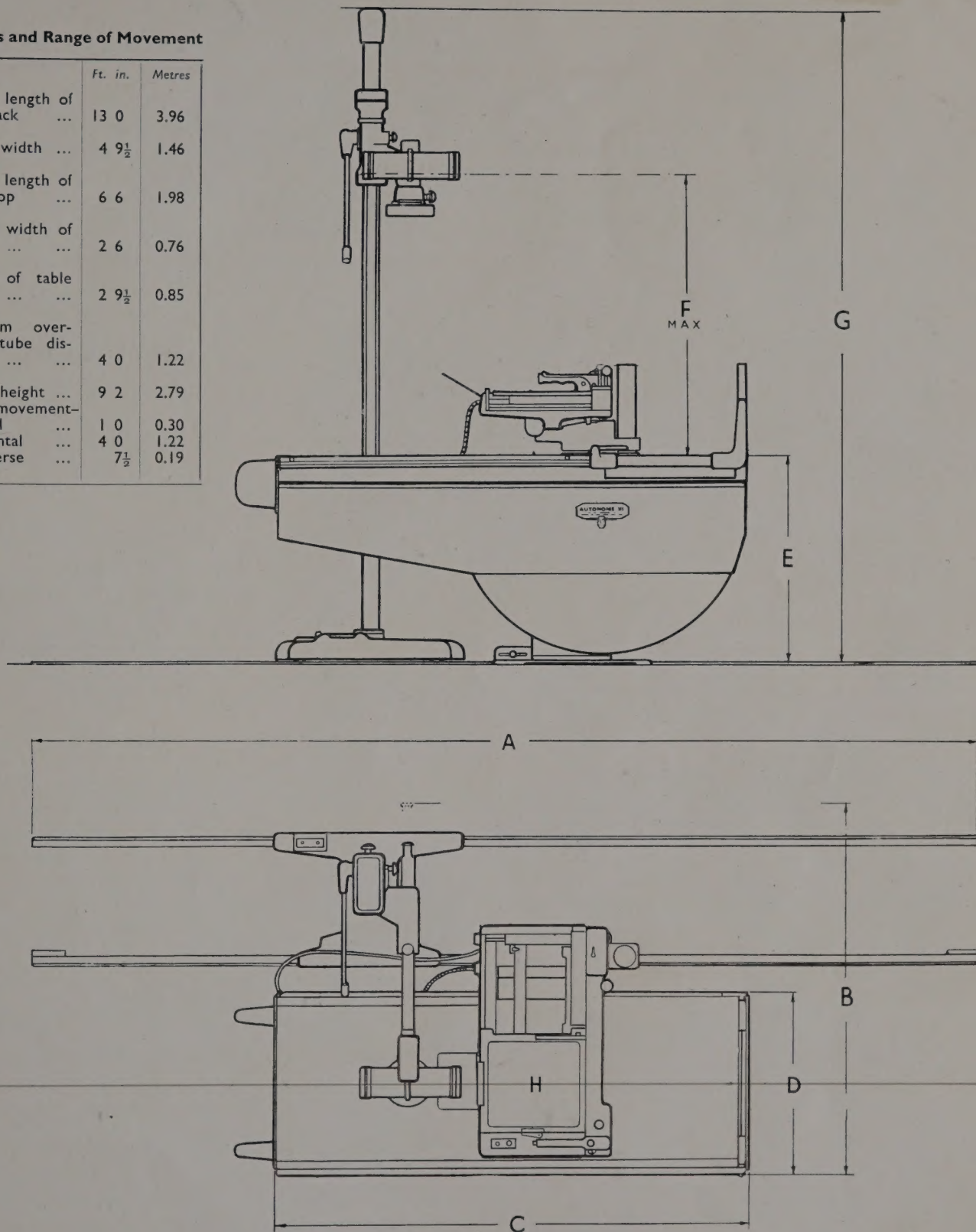
It is necessary to specify whether the changer will be required for use with English or metric size cassettes at the time of ordering.

Exposures can be made in rapid succession or immediately following fluoroscopy between exposures the X-ray tube loadings being adjusted automatically. Fluoroscopy may be controlled by push buttons on either of two accessible positions on the screen assembly. A double action radiographic exposure button is conveniently situated at the side of the fluorescent screen.



Dimensions and Range of Movement

	Ft. in.	Metres
A Overall length of floor track ...	13 0	3.96
B Overall width ...	4 9½	1.46
C Overall length of table top ...	6 6	1.98
D Overall width of table ...	2 6	0.76
E Height of table top ...	2 9½	0.85
F Maximum over-table tube distance ...	4 0	1.22
G Overall height ...	9 2	2.79
H Screen movement—vertical ...	1 0	0.30
horizontal ...	4 0	1.22
transverse ...	7½	0.19



WEIGHTS AND SHIPPING DIMENSIONS

	NET WEIGHT cwt. qr. lb.	GROSS WEIGHT cwt. qr. lb.	DIMENSIONS
Table Top, P.B. Diaphragm, Panels, Immobiliser, Instructions.	3 1 17 (172 Kg.)	5 1 3 (268 Kg.)	7' 1" x 1' 8" x 3' 0" (215 x 50 x 91 cm.)
Table Base with Motor Unit.	4 1 5 (218 Kg.)	5 3 22 (302 Kg.)	3' 2" x 2' 10" x 2' 10" (96 x 86 x 86 cm.)
Tube Stand Columns, Floor Tracks, Counterweights.	5 3 18 (300 Kg.)	7 2 16 (388 Kg.)	9' 8" x 1' 0" x 1' 4" (294 x 61 x 40 cm.)

	NET WEIGHT cwt. qr. lb.	GROSS WEIGHT cwt. qr. lb.	DIMENSIONS
Screen Carriage, Cones, Footrest, Aprons, Tube Stand, Base, Shoulder Rest, Screen, etc.	3 1 25 (176 Kg.)	5 1 3 (268 Kg.)	4' 5" x 3' 9" x 2' 6" (134 x 114 x 76 cm.)
Serial Changer, Cross Arm, Tube Stand.	1 1 16 (70 Kg.)	2 3 14 (146 Kg.)	4' 3" x 2' 9" x 2' 8" (129 x 83 x 81 cm.)

Continued from page 6.

the screen, the field of radiation being controlled by the built-in square leaf diaphragm. The tube can be uncoupled rapidly when required for over-table work without moving the table to the vertical position.

A feature of the two tube model which has considerable value in vertical chest radiography is that the patient may be screened into position with the undertable tube which may then be moved from the path of radiation and a radiograph taken from any required distance with the overtable tube.

UNDERTABLE TUBE DIAPHRAGM

The square-leaf adjustable diaphragm control, situated on the fluorescent screen frame, is easily operated with the gloved hand.

The undertable tube and diaphragm are permanently attached to the screening carriage in the case of the two-tube model but can be moved from the path of radiation for tele-radiography through the table top.

X-RAY PROTECTION

Metal shields extend the full length of the table at the working side. Additional protection is provided by enclosing the path of radiation between the X-ray tube and the shutter diaphragm, and also the space above the diaphragm as far as the movements of the parts inside the table will permit.

The fluorescent screen is equipped with protective side-wings and a detachable lead-rubber apron is provided to hang from the lower edge of the screen when the table is vertical.

For use when the table is horizontal, a second detachable lead-rubber apron is supplied to cover the area between the screen and the table top. This apron is supported above the edge of the table by spring steel strips so that it yields to pressure when the radiologist leans over the edge of the table to examine the screen.

ORDERING INFORMATION

AUTONOME III

(SERIES 4) Motor-driven table arranged for two X-ray tubes. Comprising:

Table body with reciprocating Potter-Bucky Diaphragm, Fluorescent Screen Unit with in-built Serial Changer, Motor-driven Lucidex Grid, undertable adjustable Diaphragm, Lead-rubber Aprons, Breath Guard, two Compression Cones, and Footrest.

Tube-stand with Floor Track.

Finished in white enamel.

Suitable for operation on 190-220 or 220-260v. 50-cycle supplies (specify voltage when ordering). Tables for 60-cycle supplies can be supplied to special order. For supplies of other frequencies auxiliary equipment is needed

Cat. No.

405/1

ALTERNATIVELY

The table as specified above arranged for use with a single X-ray tube

Cat. No.

405/2

EXTRAS

Immobiliser and Compression Band (8 in.) .. 577/10

Immobiliser and Compression Band (14 in.) .. 577/11

Shoulder Rest 577/13

High Ratio Grid for High Voltage Radiography 405/6

Adjustable Diaphragm and Centre Finder for overtable tube 623/12

"Sectograph" attachment for tomography—see Publication No. 578. For details of other table accessories see Publication No. 577.

Whilst every care is taken to ensure the accuracy of the descriptions and illustrations in this publication, Watson & Sons (Electro-Medical) Limited reserve the right to make such alterations in the design of the apparatus as they may consider to be in the interest of the customer. All orders are accepted subject to the Company's printed Conditions of Sale.



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